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EXAMINER	
HINES, JANA A	

ART UNIT	PAPER NUMBER
1645	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/536,533	RAI ET AL.	
	Examiner	Art Unit	
	JaNa Hines	1645	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 December 2010*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *23-28* is/are pending in the application.

4a) Of the above claim(s) *28* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *23-27* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Amendment Entry

1. The amendments of December 6, 2010 has been entered. Claims 23 and 24 have been amended. Claim 28 is withdrawn from consideration. Claims 1-22 are cancelled. Claims 23-27 are under consideration in this office action.

Withdrawal of Objections and Rejections

2. The following rejection has been withdrawn in view of applicants' amendments and arguments:

a) The objection of claim 23;

b) The new matter rejection of claim 23 under 35 U.S.C. 112, first paragraph; and

c) The rejection of claim 23 under 35 U.S.C. 112, second paragraph.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 24-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nilsson et al., (Electrophoresis. 2001. Vol. 22:2384-2390) in view of Sukosol et al..

Claim 24 is drawn to an agglutination reagent for rapid and early detection of typhoid, comprising of a carboxylated latex particles coated with antibody specific to a

Flagellin gene of *Salmonella typhi*, suspended in storage buffer. Claim 25 is drawn to the size of the said latex particles is 0.88 to 0.90 um.

Nilsson et al., teach antibodies-coated particles used in agglutination assays give more rise to limits of detection in the lower attomole regions of fully optimized systems (page 2384, col.2). Nilsson et al., teach affinity purified antibodies, carboxylated latex particles, Bovine serum albumin (BSA),TWEEN 20 surfactant, Tris, sodium hydroxide, and other reagents (page 2385, col. 1). The carboxylated latex particles were 0.9um sized (page 2385, col1). Nilsson et al., teach covalent coupling of antibodies to latex particles (page 2385, col.1). Nilsson et al., teach the antibody solution with1% of carboxylated latex particles suspended in Tris-BSA buffer (page 2385, col. 2). However Nilsson et al., do not teach the antibody specific to a flagellin gene of *Salmonella typhi.*

Sukosol et al., teach the monoclonal antibodies specific to the *S. typhi* 52kDa antigen (page 21, col.1). Sukosol et al., teach specific 52kDa antigen detected by the monoclonal antibodies was *S. typhi* flagellin (page 22, col. 1). The gene was the flagellin gene and the flagellin DNA was amplified using PCR technology (page 22, col.1-3). Sukosol et al., refers to the teaching of Ekpo et al., (J. Clin. Microbiol. 1990. Vol. 28:1818-1821) entitled Monoclonal Antibodies to 52kDa Protein of S. typhi as disclosing monoclonal antibodies from hybrid clones specific for *Salmonella typhi* antigen produced by immunizing mice with affinity-purified *S. typhi* protein.

Therefore it would have been prima facie obvious at the time of applicants' invention to apply the antibody specific to a flagellin gene of *Salmonella typhi* as taught by Sukosol et al., the agglutination reagent comprising specific antibody and latex

particles as taught by Nilsson et al., in order to advantageously achieve a n agglutination reagent for highly selective and sensitive protein detection and aide in medical diagnosis. One of ordinary skill in the art would have a reasonable expectation of success by exchanging the antibody specific to a flagellin gene of *Salmonella* typhi antibody with another antibody because are they are known to be capable of being coated onto latex particles in order to provide specific binding for use in agglutination assays. Furthermore, no more than routine skill would have been required to exchange the antibody of Nilsson et al., for the well known and functionally equivalent antibody Sukosol et al., since the art discloses the benefits of antibodies that specifically bind to flagellin.

Response to Arguments

4. Applicant's arguments filed October 27, 2010 have been fully considered but they are not persuasive.

Applicants assert that there is no reason to eliminate Nilsson's second antibody. First, the Nilsson et al., reference clearly teach one type of antibody on each latex particle (see the description of Figure 1). It is noted that only one antibody is attached to a particle, therefore the fact that Nilsson et al., teach the use of two antibodies where each is separately attached to a particle, does not overcome the fact that Nilsson et al., teach a specific antibody attached to a carboxylated latex particle. Therefore the

general scheme taught by Nilsson et al., meets the limitation of the claim where there is one antibody is bound to the particle.

Furthermore, claim 24 recites "consists essentially of." The transitional phrase "consist essentially of" limits the scope of a claim to the specified materials or steps "and those that do not materially affect the basic and novel characteristic(s)" of the claimed invention. *In re Herz*, 537 F.2d 549, 551-52, 190 USPQ 461, 463 (CCPA 1976) (emphasis in original) (Prior art hydraulic fluid required a dispersant which appellants argued was excluded from claims limited to a functional fluid "consisting essentially of" certain components. In finding the claims did not exclude the prior art dispersant, the court noted that appellants' specification indicated the claimed composition can contain any well-known additive such as a dispersant, and there was no evidence that the presence of a dispersant would materially affect the basic and novel characteristic of the claimed invention. The prior art composition had the same basic and novel characteristic (increased oxidation resistance) as well as additional enhanced detergent and dispersant characteristics.). For the purposes of searching for and applying prior art under 35 U.S.C. 102 and 103, absent a clear indication in the specification or claims of what the basic and novel characteristics actually are, "consisting essentially of" will be construed as equivalent to "comprising." See, e.g., PPG, 156 F.3d at 1355, 48 USPQ2d at 1355 ("PPG could have defined the scope of the phrase consisting essentially of' for purposes of its patent by making clear in its specification what it regarded as constituting a material change in the basic and novel characteristics of the invention.").

See also *AK Steel Corp. v. Sollac*, 344 F.3d 1234, 1240-41, 68 USPQ2d 1280, 1283-84 (Fed. Cir. 2003).

Therefore applicants' argument that Nilsson et al., is not obvious because it discloses an agglutination reagent with a second antibody is not persuasive since Nilsson et al., teach the same process and reagents; the art may teach unrecited or additional elements not recited by the claims and the claims do not exclude the teachings of Nilsson et al; thus the argument is not persuasive and the rejection is maintained.

Applicants argue that there is no teaching or reason to use the claimed storage buffer. However, contrary to Applicants assertion, Nilsson et al., teach the antibody solution with1% of carboxylated latex particles suspended in Tris-BSA buffer. Therefore applicants argument is not found persuasive and the rejection is maintained.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 23-24 and 26-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nilsson et al., (Electrophoresis. 2001. Vol. 22:2384-2390) and Sukosol et al., (Asian Pacific J. of Allergy and Immuno. 1994. Vol. 12. pages 21-25) in

view of Salzman et al (WO 01/40280 published June 1, 2001) and Fruitstone et al., (US Patent 4,379,847 published April 12, 1983).

Claim 23 is drawn to a process for the preparation of an agglutination reagent for rapid and early detection of typhoid comprising: (a) preparing antibody specific to a flagellin gene of *Salmonella typhi*; (b) preparing latex particles suspension; (c) coating of the said latex particles with the said antibody specific to said flagellin gene of *S.. typhi*; wherein the said antibody specific to the flagellin gene of *S. typhi* is prepared according to a method comprising: (i) raising the hyper immune sera against a purified protein encoded by a flagellin gene specific to *S. typhi*, and (ii) separating the antibody specific to the Flagellin gene of *S. typhi* from the hyper immune sera; wherein said latex particle suspension is prepared according to a method consisting essentially of: (i) mixing 1% carboxylated latex particles and a 40 mM 2-N morpholinoethane sulphonic acid (MES) buffer of pH 5.5 to 6.5 in a ratio of 1:1, washing with a 20 mM MES buffer of pH 5.5 thereby forming a washed latex particle, and (ii) adding a 1-ethyl-3 (3-dimethyl-amino propyl) carbodiimide hydrochloride (EDC) in a 20 mM MES buffer of pH 5.5 to said washed latex particle in a ratio of 1:1, washing with a 20 mM MES buffer (pH 5.5); and wherein said latex particle is coated according to a method consisting essentially of: (i) reacting said antibody specific to the Flagellin gene of *S. typhi* with said washed latex particle thereby forming an antibody specific to the Flagellin gene of *S. typhi* coated latex particle, (ii) stopping the reacting step (i) by adding 1M glycine (pH 11.0), and (iii) washing said antibody specific to the Flagellin gene of *S. typhi* coated latex particle with

a washing buffer consisting essentially of 50 mM glycine, pH 8.5; 0.03% surfactant and 0.05% sodium azide.

Claim 24 is drawn to an agglutination reagent for rapid and early detection of typhoid, comprising of 1% carboxylated latex particles coated with antibody specific to *Salmonella typhi*, suspended in storage buffer. Claim 25 is drawn to the size of the said latex particles is 0.88 to 0.90 um. Claim 26 is drawn the storage buffer is comprised of 50 mM glycine pH 8.5, 1.0% bovine serum albumin, 0.03 % surfactant, 0.1% sodium azide and 0.01% thimerosal. Claim 27 is drawn wherein the antibody is the immunoglobulin fraction, of the hyper immune sera raised in rabbit against the recombinant protein expressed by cloning of Flagellin gene sequence specific to *Salmonella typhi* by recombinant DNA technology, suspended in 50 mM phosphate buffer.

Nilsson et al., teach a general method applicable to most proteins that creates a system for highly selective and sensitive protein detection (page 2384, col.1). Nilsson et al., teach antibodies-coated particles used in agglutination assays give more rise to limits of detection in the lower attomole regions of fully optimized systems (page 2384, col.2). Nilsson et al., teach the materials to include: affinity purified antibodies, carboxylated latex particles, 2-(N-Morpholino)ethane-sulfonic acid (MES), ethyl-3(3-dimethylaminopropyl)-carbodiimide (EDC). Bovine serum albumin (BSA),TWEEN 20, a surfactant, Tris, sodium hydroxide, and other reagents (page 2385, col. 1). Nilsson et al., teach covalent coupling of antibodies to latex particles (page 2385, col.1). The carboxylated latex particles (0.9um) were washed in MES buffer, pH 5.5 and

resuspended (page 2385, col1). EDC was added to the particles (page 2385. col. 1). Nilsson et al., antibody solution containing BSA was added to the activated particles, coupling the antibodies. Nilsson et al., teach washing with Tris-BSA buffer (page 2385, col. 1-2). Nilsson et al., teach carboxylated latex particles suspended in Tris-BSA buffer (page 2385, col. 2). However Nilsson et al., do not teach using an antibody specific to flagellin gene of *Salmonella typhi* or the preparation of the flagellin gene of *S. typhi* as claimed.

Sukosol et al., teach the monoclonal antibodies specific to the *S. typhi* 52kDa antigen (page 21, col.1). Sukosol et al., using the flagellin antigen to aide in the diagnosis of typhoid fever. Sukosol et al., teach specific 52kDa antigen detected by the monoclonal antibodies was *S. typhi* flagellin (page 22, col. 1). The gene was the flagellin gene and the flagellin DNA was amplified using PCR technology (page 22, col.1-3). Sukosol et al., teach the production of purified protein encoded by a flagellin gene from *Salmonella typhi* (page 21, col. 1). Sukosol et al., teach that the antibodies do not cross react with relation proteins from 11 other bacteria causing enteric fever and enteric fever-like illness (page 21, col.1-2). Sukosol et al., teach the construction and screened for the recombinant clones expressing specific *S. typhi* antigens (page 21, col.3). Sukosol et al., refer to the teaching of Ekpo et al., (J. Clin. Microbiol. 1990. Vol. 28:1818-1821) entitled *Monoclonal Antibodies to 52kDa Protein of S. typhi* as disclosing monoclonal antibodies from hybrid clones specific for *Salmonella typhi* antigen produced by immunizing mice with affinity-purified *S. typhi* protein.

Salzman et al., teach the production of antibodies with immunization in a host animal, wherein one or more injections of the flagellin protein are administered to produce hyper immune sera (page 12, para. 3). Salzman et al., teach an antibody that binds specifically to flagellin wherein the antibody can be either polyclonal or monoclonal (page, 2,lines 6-8). Salzman et al., teach antibodies to flagellin sequences, polyclonal, monoclonal, humanized, human, fragments and single chain, bispecific, and heteroconjugate antibodies (pages 10-21). Salzman et al., teach the antibodies of the hyper immune sera were isolated by well known techniques (page 13, para. 1). Salzman et al, also teach antibody purification by conventional immunoglobulin purification procedures (page 14, para. 4).

Fruitstone et al., (US Patent 4,379,847 published April 12, 1983) teach suspending medium for immunologic reactions which includes a salt solution, a buffer, an organic solute and albumin (abstract). Fruitstone et al., teach agglutination reactions have conventionally been in media comprised of saline or albumin solutions where antibodies are washed in suspended in saline solutions but there are disadvantages making evaluation difficult (col. 2, lines 15-30). The suspending medium preferably has azide salts such as the preferred sodium, where sodium azide serves the dual role of affecting ionic strength and acting as a preservative against microbial contamination (col. 2, lines 30-36). Fruitstone et al., teach the preservative function of sodium azide can be particularly beneficial when used with mercury-containing preservatives such as thimerosal (col. 2, lines 36-39). Fruitstone et al., teach the solution includes preservatives, bacteriostats or antibiotics in preserving amounts of thimerosal, sodium

azide or combinations thereof (col. 4, lines 22-24). Fruitstone et al., teach bovine serum albumin is preferable because of its availability and cost (col. 3, lines 31-34). The albumin is substantially salt-free or low in salt so as not to contribute appreciably to the ionic strength of the final solution (col. 3, lines 35-37). Fruitstone et al., teach the suspending medium having bovine serum albumin (claim 4); the salt as sodium azide (claims 5-6 and 13-15); the organic solute as glycine claim (9); the pH controlling buffer as phosphate buffer (claims 16-19); the bacteriostat as thimerosal (claim 21); or the suspending medium comprising a preserving amount of thimerosal (claims 23-24). Fruitstone et al., teach in Example IV solutions containing phosphate buffered saline and a preservative, along with the phosphate buffer and albumin (col. 7, lines 12-16). Fruitstone et al., teach the solutions can be used with latex particle agglutination test (col. 4, lines 31-34).

Therefore it would have been prima facie obvious at the time of applicants' invention to apply the antibody specific to the flagellin gene of *Salmonella typhi* as taught by Sukosol et al., the preparation of the of the purified protein as taught by Salzman et al., and the storage buffers as taught by Fruitstone et al., to the method for the preparation of agglutination reagents as taught by Nilsson et al., in order to provide advantageously achieve for agglutination reagent used for diagnosis which overcomes disadvantages associated with agglutination test while providing highly selective and sensitive typhoid detection. One of ordinary skill in the art would have a reasonable expectation of success by incorporating and coating an antibody specific for the flagellin gene of *S.* typhi onto latex particles in order to provide specific binding within a well

known and general method applicable to most antibodies to create a system for highly selective and sensitive detection.

Furthermore, no more than routine skill would have been required to incorporate raising hyperimmune sera against the flagellin protein using the flagellin protein of Sukosol et al., when purified the protein that encodes flagellin is already known in the art and Salzman et al., teach antibodies raised against a flagellin polypeptides. Additionally, it would have been prima facie obvious to combine the prior art teachings including Fruitstone et al., to advantageously achieve a suspending medium for latex particle agglutination storage medium that includes sodium azide which has the dual role of affecting ionic strength and acting as a preservative against microbial contamination, is known to work beneficially with thimerosal, a preservative or bacteriostat, wherein the solution is also known in the prior art to also contain glycine, bovine serum albumin and surfactants which will overcome the known disadvantages of other suspending mediums. Finally, all the claimed elements, such as an antibody specific to the flagellin gene of S. typhi, preparation of the gene, and storage buffer were all known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination would have yielded predictable results to one of ordinary skill in the art at the time of the invention.

Response to Arguments

6. Applicant's arguments filed October 27, 2010 have been fully considered but they are not persuasive.

I) With respect to Claim 23, applicants assert that there is no reason to eliminate Nilsson's second antibody. First, the Nilsson et al., reference clearly teach one type of antibody on each latex particle (see the description of Figure 1). Therefore the general scheme taught by Nilsson et al., meets the limitation of the claim where there is one type of antibody bound to the particle. Furthermore, claim 23 recites the transitional phrase "consist essentially of". As stated above and based upon MPEP 2111.03 [R-3] for the purposes of searching for and applying prior art under 35 U.S.C. 102 and 103, absent a clear indication in the specification or claims of what the basic and novel characteristics actually are, "consisting essentially of" will be construed as equivalent to "comprising." As previously discussed, the transitional term "comprising" is inclusive or open-ended and does not exclude additional, unrecited elements or method steps. Therefore applicants' argument that Nilsson et al., is not obvious because it discloses a process with a second antibody when Nilsson et al., clearly teach one type of antibody on each latex particle, along with teaching the same process and reagents. the art may teach unrecited or additional elements not recited by the claims and the claims do not exclude the teachings of Nilsson et al; thus the Nilsson et al., reference is retained.

Therefore, applicants assertion that reacting the second antibody bound particle do not meet the limitations of the instant claims. It is noted that both of the antibodies of Nilsson are directed to the same antigen. Therefore, when applying the scheme of

Nilsson, the use of an additional antibody directed to the same antigen as the first antibody is encompassed by the instant claims. Moreover, applicants specification at the last paragraph of Page 9 recites that "such modifications, changes, Adaptations are intended to be within the scope of the present invention…" Therefore applicants argument is not persuasive.

II) Applicants urge that there is no reason to substitute Nilsson's blocking and washing steps with the recited ones.). In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.,* 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Nilsson et al., teach the materials to include: affinity purified antibodies, carboxylated latex particles, 2-(N-Morpholino)ethane-sulfonic acid (MES), ethyl-3(3-dimethylaminopropyl)-carbodiimide (EDC). Bovine serum albumin (BSA),TWEEN 20, a surfactant, Tris, sodium hydroxide, and other reagents (page 2385, col. 1). Nilsson et al., teach covalent coupling of antibodies to latex particles (page 2385, col.1). The carboxylated latex particles (0.9um) were washed in MES buffer, pH 5.5 and resuspended (page 2385, col1). EDC was added to the particles (page 2385. col. 1). Nilsson et al., antibody solution containing BSA was added to the activated particles, coupling the antibodies. Nilsson et al., teach washing with Tris-BSA buffer (page 2385, col. 1-2). Nilsson et al., teach carboxylated latex particles suspended in Tris-BSA buffer (page 2385, col. 2). Fruitstone et al., teach the suspending medium having bovine serum albumin; the salt as sodium azide; and the organic solute as

glycine; therefore the prior art teach washing the antibody coated latex particle with a washing buffer consisting essentially of glycine, surfactant and sodium azide.

Furthermore, it would have been prima facie obvious to combine the prior art teachings including Fruitstone et al., to advantageously achieve a suspending medium for latex particle agglutination storage medium that includes sodium azide because it both affects ionic strength while simultaneously acts as a preservative against microbial contamination, is known to work beneficially with thimerosal, a preservative or bacteriostat, and is also known in the prior art to also contain glycine, bovine serum albumin and surfactants which will overcome the known disadvantages of other suspending mediums.

III) Applicants argue that there is no teaching or reason to use the claimed storage buffer. However, Nilsson et al., teach the antibody solution with1% of carboxylated latex particles suspended in Tris-BSA buffer.

Only claim 26 recites the ingredients of the storage buffer, while claim 24 is silent as to the components of the storage buffer. Nilsson et al., teach antibody coated carboxylated latex particles suspended in Tris-BSA buffer. Fruitstone et al., teach suspending medium comprising includes a glycine, bovine serum albumin, sodium azide and thimerosal. Therefore applicants' assertion is not found persuasive, when the prior art references recite exactly the same components.

Applicants assert that Fruitstone's pointed statement that "…the solution may be used in other types of immunologic reactions, such as latex particle agglutination test"

does not provide sufficient evidence to enable on to believe it would work. Fruitstone et al., teach agglutination reactions have conventionally been in media comprised of saline or albumin solutions where antibodies are washed in suspended in saline solutions but there are disadvantages making evaluation difficult, thus, Fruitstone et al., provide to reagents necessary to overcome the disadvantages of the prior art and render applicants enablement argument as irrelevant. Moreover, the issue is not enablement, instead the issue is whether the prior art teaches that the storage buffer solutions. The MPEP section 2123 is drawn to the relevancy of prior art for all they contain, The use of references is not limited to what the authors describe as their own inventions or to the problems with which they are concerned. They are part of the literature of the art, relevant for all they contain. *In re Heck*, 699 F.2d 1331, 1332-33, 216 USPQ 1038, 1039 (Fed. Cir. 1983) (quoting *In re Lemelson*, 397 F.2d 1006, 1009, 158 USPQ 275, 277 (CCPA 1968)). A reference may be relied upon for all that it would have reasonably suggested to one having ordinary skill the art, including nonpreferred embodiments. *Merck & Co. v. Biocraft Laboratories*, 874 F.2d 804, 10 USPQ2d 1843 (Fed. Cir.), cert. denied, 493 U.S. 975 (1989). Therefore applicant's argument is not persuasive especially when considering the reference explicitly states the use of the solution with latex particle agglutination test.

IV) Applicants assert that the prior art was not capable of detecting typhoid at the onset of infection. Applicant has pointed to the Widal test, culture test, ELISA based test and radioimmunoassay which are all capable of detecting typhoid but have shortcomings. Applicant asserts that the instant invention takes 1-2 minutes and has a

color result. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies i.e., the assay taking 1-2 minutes or having a color result are not recited in the rejected claims. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). The claims are drawn to a process for preparing an agglutination reagent and the agglutination reagent; the claims are not drawn to methods for detecting typhoid. Additionally, Nilsson et al., teach identification of antigens by the color combinations of capture and detection particles. Therefore the argument is not persuasive.

V) Applicants assert that claims 23-24 are directed to agglutination test, therefor the rejection should be withdrawn. It is the position of the office that claim 23 is drawn to a process for the preparation of an agglutination reagent for rapid and early detection of typhoid and not to agglutination test. Claims 24 is drawn to a agglutination regent comprising carboxylated latex particles coated with an antibody specific for a flagellin gene. Neither claims 23 nor 24 combine the reagent with a sample, allow contact of the sample with the agglutination reagent such that a complex is formed between the antibody bound latex particle and an available epitope on the flagellin gene. There is no detection of the formed complex and agglutination test preformed to thereby detect typhoid. As a matter of fact, the instant specification is silent on the performance of an agglutination assay. Therefore, applicants mischaracterize the focus of claims 23 and

24 which is instead drawn to the preparation of the agglutination reagent and the agglutination reagent.

Furthermore, Nilsson et al., teach antibodies-coated particles used in agglutination assays give more rise to limits of detection in the lower attomole regions of fully optimized systems. Fruitstone et al., teach agglutination reactions have conventionally been in media comprised of saline or albumin solutions where antibodies are washed in suspended in saline solutions but there are disadvantages making evaluation difficult and that the solutions can be used with latex particle agglutination test. Thus, it is noted that while the instant claims do not require performance of an agglutination test, the prior art clearly teach agglutination assay testings.

Therefore applicants argument is not found persuasive and the rejection is maintained.

Conclusion

7. No claims allowed.

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ja-Na Hines whose telephone number is 571-272-0859. The examiner can normally be reached Monday thru Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's acting supervisor Patricia Duffy, can be reached on 571-272-0855. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/JaNa Hines/
Examiner, Art Unit 1645

/Mark Navarro/
Primary Examiner, Art Unit 1645